



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/522,317

01/25/2005

Michel Willemin

ICB0204

3280

24203

7590

07/07/2006

GRIFFIN & SZIPL, PC

SUITE PH-1

2300 NINTH STREET, SOUTH

ARLINGTON, VA 22204

EXAMINER

GAGLIARDI, ALBERT J

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/522,317	Applicant(s) WILLEMIN ET AL.	
	Examiner Albert J. Gagliardi	Art Unit 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Comment on Submissions

1. This Office Action is responsive to submissions, including the preliminary amendment of 25 January 2005.

Claim Objections

2. Claims 22-23 are objected to because of the following informalities:

The claims include a limitation relating to a “revolution” lens. The examiner considers such expression as a translation error whereas the proper limitation should relate to a “spherical” lens.

3. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 17-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson (US 5,225,827) in view of Ross (US 2002/0175813).

Regarding claim 17, *Persson* discloses (Figs. 1, 4) a device for detecting crossing of a horizontal lane demarcation mark (10) of a carriageway for motor vehicles, wherein it includes at least one box (A) placed under the vehicle and enclosing means for projecting a light beam (8) onto the carriageway in a distinct zone, and distinct means (12) for picking up the light beam (18) after reflection onto the carriageway.

Regarding the box including at least two light projecting means and two pick up means, although not disclosed by *Person*, *Ross* discloses a highway line detector wherein either single of multiple beams may be utilized [0050]. *Ross* teaches that by increasing the number of detectors lateral drift can be detected [0050]. Therefore it would have been obvious to a person of ordinary skill in the art to modify the device of *Persson* to include two light projectors and two detectors to further allow for drift detection. Regarding the multiple beam projectors as being arranged as master and slave, such an arrangement is known in the art (applicant's admission at page 1, lines 30-35 of the specification), and would have been an obvious modification in order to reduce cross talk among multiple sensors.

Regarding claims 18 and 19, although the device as suggested by *Persson* and *Ross* as applied to claims 17 above does not specifically suggest the particular details of the light projecting and detecting of the multiple beams to/from the distinct zones, those skilled in the art appreciate that such means are well known including functionally equivalent means utilizing single source/detector elements and a beams splitter or multiple source/detector pairs, either of

Art Unit: 2884

which would have been an obvious design choice within the skill of a person of ordinary skill in the art depending on the needs of the application.

Regarding claims 20-31, *Ross* suggests the use of lenses (134-136, for example). Spherical lenses, both mineral and organic, are well known and would have been considered functionally equivalent alternative design choices for directing and focusing the light beams.

Regarding claims 32-33, 34-35 and 36-37 *Ross* suggests a box (enclosure – 132) including an optical unit (133) carrying the lenses wherein the lenses are individually and integrally mounted on the optical unit. Such an arrangement would have been an obvious modification to the device disclosed by *Persson* in view of its simple and compact design.

Regarding claims 38-39, *Persson* discloses the use of optical transmission (Fig. 3) and reception tubes (Fig. 4), the number and arrangement of which (i.e., in cavities in the box such as suggested by *Ross*) would have been an obvious design choice depending on the needs of the application.

Regarding claims 40-41, *Persson* discloses that sources are infrared emitting diodes (1).

Regarding claims 42-43, although not specifically disclosed, the use of surface mounting and/or flip-chip mounting on printed circuit boards is well, known and considered an obvious design choice in view of the economical nature of such mounting.

Regarding claim 44, *Persson* and *Ross* suggest the light beams are directed at the surface of the carriageway.

Regarding claims 45-46, although *Persson* and *Ross* do not specifically suggest the optical devices including a screen (mask or diaphragm) including a hole, those skilled in the art appreciate that the use diaphragms including an aperture are well known for use in conjunction

Art Unit: 2884

with beam directing devices and would have been an obvious design choice. The particular disposition angle of the screen would have been a matter of routine design choice.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call-800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Albert J. Gagliardi
Primary Examiner
Art Unit 2884

AJG